

## CLAIMS

1. A fixed-bed multitubular reactor, comprising:

a plurality of reaction tubes to be packed with a catalyst; and

5 catalyst temperature measurers equipped to measure the temperature near the center part in the radial direction of the reaction tubes, the catalyst temperature measurers being installed in each of a part or all of the plurality of the reaction tubes, the measurement positions thereof being different from each other in the longitudinal direction of the reaction tubes.

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2. The fixed-bed multitubular reactor according to claim 1, wherein the catalyst temperature measurers are equipped in 5 to 35 tubes out of a reaction tube group comprising 5 to 105 reaction tubes adjacent to each other.

15 3. The fixed-bed multitubular reactor according to claim 2, wherein a plurality of the reaction tube groups are provided and allocated to the portions where a flow pattern of a heat medium flowing outside the reaction tubes of each reaction tube groups is different.

20 4. The fixed-bed multitubular reactor according to claim 1, wherein the reactor is for a gas-phase catalytic oxidation reaction.

5. The fixed-bed multitubular reactor according to claim 4, wherein the gas-phase catalytic oxidation reaction is a reaction synthesizing an unsaturated aldehyde or an unsaturated carboxylic acid from propylene, isobutylene or tertiary butyl alcohol.

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6. The fixed-bed multitubular reactor according to claim 4, wherein the gas-phase catalytic oxidation reaction is a reaction synthesizing an unsaturated carboxylic acid from an unsaturated aldehyde.